

REMARKS**Summary of the Office Action**

Claims 1-3 and 20-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Published Patent Application No. 2002/0120972 to Nakamura ("Nakamura") in view of U.S. Patent No. 6,200,195 to Furuno ("Furuno").

Summary of the Response to the Office Action

Claims 1-3 and 20-47 are pending for consideration. **Please note the new docket number, 068029-5005.**

Rejection Under 35 U.S.C. § 103(a)

Claims 1-3 and 20-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamuro in view of Furuno. Applicants respectfully traverse the rejection of the claims.

As a preliminary matter, Applicants will repeat the arguments of the previous response because the rejections are the same and the arguments are not properly addressed:

The Office Action states that "[f]or claims 1 and 2, the cloth layer 2, flexible hot-melt film layer 11, and adhesive layer 12 of Nakamura read on the fabric layer, barrier layer, and adhesive layer of the claimed invention. The liquid silicone layer is interpreted as uncured adhesive silicone gel prior to heat lamination." This interpretation directly contradicts the disclosure of Nakamuro.

Paragraph [0046] of Nakamura explains the application of a mixture on the film layer to create layer sheet 1: "The mixture applied layer is maintained horizontal and is heated at approximately 80 degrees (centigrade) for approximately 5 minutes, so that the applied polyurethane adhesive layer may be cured." Paragraph [0050] explains sewing the layer sheet (including the cured mixture applied layer) to the cloth 2. As an alternative to sewing, paragraphs [0052] and [0053] explain installation of the layer sheet 1 onto the cloth 2 by heating. There is no mention in the specification of this curing being done only when the layer sheet is sewn onto the cloth as asserted in the Office Action.

Paragraph [0053] recites that in welding the film layer 11 onto the sheet, hot air at 150-500° C is blown onto the film layer. Thus, even if it were not otherwise clear that the mixture applied layer was cured before applying the layer sheet 1 to cloth 2, the fact that hot air at such a high temperature is blown onto the film layer would mean there was no point in heating to 80° C (as described in paragraph [0046]) for curing the mixture applied layer after applying the layer sheet 1 to cloth 2. Therefore, as explained in both the Interview with the Examiner and in the last Amendment, there is no need for an impervious barrier layer in Nakamura because the adhesive coating (mixture applied layer) is cured before layer sheet 1 is applied to cloth 2.

In the Response to Arguments, it is asserted that “[c]learly, the pre-cured layer sheet is for sewing, not for the relied upon method of heat curing/welding” with no citation of the Nakamura specification for support. As explained above, Nakamura clearly discloses that the mixture applied layer is cured before applying the layer sheet to the cloth regardless of whether sewing or heating is used.

The Response to Arguments also asserts that “the claim language does not exclude the presence of ‘vent holes’ in the barrier layer.” As correctly noted in the Office Action, claim 1 now recites that the barrier layer is “impervious.” “Impervious” is defined as “[i]mpossible to penetrate.” (THE AMERICAN HERITAGE COLLEGE DICTIONARY 681 (3d ed. 2000).) An impervious barrier as recited in claim 1 would clearly have no vent holes as disclosed in Nakamura.

The Response to Arguments further states:

[S]ince Nakamura teaches that the hot melt flexible film layer avoids exuding a liquid silicone rubber on the outer surface of the clothing, and Furuno teaches discrete cured layers, the combined teachings of prior art clearly read on the newly added term “an impervious barrier layer”.

Nakamura clearly discloses in paragraph [0036] that “[t]he layer sheet has vent holes which maintain breathable condition” without limiting it to a particular method of attaching the layer sheet to the cloth. A layer sheet with vent holes cannot be considered impervious. In addition, there is no need for the layer sheet of Nakamura to be impervious because the mixture applied layer is cured before the layer sheet is applied to the cloth. With the adhesive already cured, there is no chance of adhesive being absorbed into the cloth in Nakamura through the vent holes.

Even assuming, for the sake of argument, that Furuno supplies any missing elements from the claims, MPEP § 2143.01.V teaches that “[i]f proposed modification would render the prior art invention being modified unsuitable for its intended purpose, then there is no suggestion or motivation to make the proposed

modification.” Again, paragraph [0036] of Nakamura teaches that “[t]he layer sheet has vent holes which maintain breathable condition.” An impervious barrier layer does not maintain breathable condition. Thus, Nakamura clearly teaches away from an impervious barrier layer. Further, there would be no reason to have an impervious barrier layer because, as explained above, adhesive of the mixture applied layer of Nakamura is cured before applying layer sheet 1 to cloth 2. Having such an impervious barrier layer would be inconsistent with the vent holes disclosed in Nakamura.

In the Response to Arguments, the Office Action repeats from the previous Office Action that “[c]learly, the abovementioned pre-cured layer sheet is for sewing, not for the relied upon method of heat curing/welding,” but again, there is no support for this proposition. Instead, the Office Action redirects the argument by saying that “Nakamura teaches that the hot melt flexible film layer avoids exuding a liquid silicone rubber on the outer surface of the clothing thereby maintaining its appearance [0066], which necessarily infers that the liquid silicone layer is in uncured state, because a cured (crosslinked) silicone would not flow, nor exude.”

The Examiner’s argument quoted above contradicts itself. Removing the phrase that reflects the Examiner’s conclusion (“which necessarily infers that the liquid silicone layer is in uncured state”) results in the statement: “Nakamura teaches that the hot melt flexible film layer avoids exuding a liquid silicone rubber on the outer surface of the clothing thereby maintaining its appearance [0066]... because a cured (crosslinked) silicone would not flow, nor exude.” This statement is exactly the point Applicants made in the last response. Of course the liquid silicone rubber is not exuded on the outside of the clothing – the rubber has been cured before the layer sheet comes into contact with the clothing. The statement “which necessarily infers that the liquid silicone layer is in uncured state”, however, contradicts the remainder of the sentence.

Paragraphs [0023] and [0039] both state that “[a] layer sheet is a sheet made by laminating an adhesive layer and a film layer...” Paragraphs [0039]-[0041] appear under the

heading "Manufacturing a layer sheet" rather than a heading "Manufacturing a layer sheet for installation by sewing." Paragraph [0040] explains "that the applied polyurethane adhesive layer [is] cured" in the process of manufacturing a layer sheet. Under the heading "Installation by heating," paragraph [0044] explains that "a heating device 4 is placed on the cloth 2 and presses against the cloth 2 and the film layer 11 for heating the film layer 11 to be melted." Because, as explained in paragraphs [0039] and [0040], a layer sheet includes a cured adhesive layer, there is no need to have an impervious barrier layer as recited in the claims. As the Office Action helpfully explains, "a cured (crosslinked) silicone would not flow, nor exude."

The Office Action further states that "nowhere Nakamura teaches (*sic*) that the vent holes must be present in the sheet prior to installation, it would have been obvious to one of ordinary skill in the art to form the vent holes after the installation of the sag-preventive member, motivated by the desire to obtain breathability [0036]." Nakamura teaches at paragraph [0029] that the vent hole ratio "may range from approximately 5% to 85%." Neither Nakamura nor the Office Action explain how such a large surface area of vent holes would be formed after installation without damaging the cloth to which the layer sheet is applied.

In Nakamura, the only logical time to insert the vent holes is prior to installation of the layer sheet onto the clothing. In fact, the most logical time for applying vent holes is before the silicone rubber is placed on the hot melt flexible film layer and before the layer sheet is applied to the clothing. Waiting until the layer sheet is applied to add vent holes at the very least greatly complicates the procedure. Neither Nakamura nor the Examiner has provided any explanation of how this would be accomplished or how damage to the clothing would be avoided in such a procedure.

For at least these reasons, Applicants respectfully request that the rejection of claims 1-3 and 20-47 under 35 U.S.C. § 103(a) as being unpatentable over EP '310 in view of Furuno be withdrawn.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account. **Please note that the attorney docket number has been changed to 068029-5005 as a result of the change in counsel.**

Respectfully submitted,

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Dated: October 6, 2008

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